PATENT

Atty Docket No.: 10014769-3
App. Ser. No.: 10/697,940

IN THE CLAIMS:

Please find below a listing of all of the pending claims. The statuses of the claims are set forth in parentheses.

1. (Canceled).

2. (Previously Presented) The system according to claim 6, further comprising:

a plurality of valve controllers, each of said valve controllers being connected to at least one of said valves, wherein said plurality of valve controllers are operable to independently control each of said valves to thereby control the flow of said fluid through each of said nozzles.

3. (Previously Presented) The system according to claim 2, further comprising:

a plurality of temperature sensors, each of said temperature sensors being configured to measure a temperature of each of said heat generating components, wherein said plurality of valve controllers are configured to independently control each of said valves in response to said measured temperatures of each of said heat generating components.

4. (Previously Presented) The system according to claim 2, wherein each of said plurality of valve controllers is operable to independently control each of said valves on the basis of an anticipated amount of heat predicted to be generated by each of said heat generating components.

5. (Canceled).

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6. (Currently amended) A system ~~for cooling heat generating components, said system~~ comprising:

a plurality of heat generating components;

a cooling system comprising,

_____a variable speed blower;

_____a plenum having an inlet and a plurality of outlets, wherein said inlet of said plenum is in fluid communication with said blower;

_____a plurality of nozzles, each of said nozzles having a first end and a second end, each of said first ends of said nozzles being connected to said plurality of outlets of said plenum and each of said second ends of said nozzles terminating at a location ~~substantially close to at least one heat generating component~~ with respect to respective ones of the heat generating components such that the heat generating components are within respective impinging zones of the cooling fluid flowing out of the plurality of nozzles;

_____a valve located along each of said nozzles to independently vary a flow of said cooling fluid through each of said nozzles;

_____a blower controller operable to control the speed of said blower; and

_____a pressure sensor situated within said plenum to measure a pressure of said fluid located within said plenum,

_____wherein said blower controller is operable to vary an output of said fluid from said blower on the basis of a measured pressure of said fluid in the plenum.

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7. (Previously Presented) The system according to claim 6, wherein said plenum includes a divider, said divider operable to divide said plenum into a first chamber and a second chamber.

8. (Original) The system according to claim 7, wherein said first chamber is in fluid communication with said blower and said second chamber is in fluid communication with said nozzles, and wherein said divider operates to maintain a pressure of said fluid in said second chamber at a substantially uniform pressure.

9. (Previously Presented) The system according to claim 6, wherein said valves comprise pulsating valves.

10-18. (Canceled).

19. (Previously Presented) The rack system according to claim 20, further comprising:

a plurality of valve controllers, each of said valve controllers being connected to at least one of said valves, wherein said plurality of valve controllers are operable to independently control each of said valves to thereby control the flow of said fluid through each of said nozzles.

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20. (Currently amended) A rack system ~~for housing a plurality of heat generating components, said rack system~~ comprising:

an enclosure having a plenum including a divider separating said plenum into a first chamber and a second chamber, said second chamber comprising a plurality of outlets for discharging a cooling fluid, said plenum extending generally along a side of said enclosure;

a plurality of heat generating components housed in the enclosure;

at least one variable speed blower configured to supply the cooling fluid into said plenum;

a plurality of nozzles having a first end in fluid communication with each of said plurality of outlets and a second end positioned ~~substantially close to a respective one of said heat generating components~~ with respect to respective ones of the plurality of heat generating components such that the plurality of heat generating components are within respective impinging zones of the cooling fluid flowing out of the plurality of nozzles;

a plurality of valves, each of said valves being operable to vary the flow of said cooling fluid through each of said nozzles;

a blower controller operable to control the speed of said blower; and

a pressure sensor situated within said plenum to measure the pressure of said fluid located within said plenum,

wherein said blower controller is operable to vary the output of said fluid from said blower on the basis of the measured pressure of said fluid in the plenum.

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21. (Currently amended) The rack system according to claim 20, further comprising:

a plurality of heat generating components housed in the enclosure, ~~said plurality of heat generating components comprising one or more~~ and selected from the group consisting of processors, micro-controllers, high speed video cards, disk drives, [[and]] semi-conductor devices, and combinations thereof..

22. (Previously Presented) The rack system according to claim 21, further comprising:

a plurality of temperature sensors, said plurality of temperature sensors being configured to measure temperatures of the plurality of heat generating components, wherein said valve controllers are configured to independently control each of said valves in response to said measured temperatures of the plurality of heat generating components.

23. (Previously Presented) The rack system according to claim 21, wherein each of said valve controllers is operable to independently control each of said valves on the basis of an anticipated amount of heat predicted to be generated by the plurality of heat generating components.

24. (Previously Presented) The rack system according to claim 20, wherein the first chamber is in fluid communication with the blower and the second chamber is in fluid communication with the plurality of nozzles, and wherein the divider operates to maintain a pressure of the cooling fluid in the second chamber at a substantially uniform pressure.

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25. (Currently amended) An electronic device comprising:

a plurality of heat generating means; and

means for cooling the plurality of heat generating means, said means for cooling comprising:

means for variably supplying a plenum with cooling fluid;

means for detecting a pressure of the cooling fluid in the plenum, wherein the means for variably supplying the plenum with cooling fluid is configured to vary the supply of cooling fluid in the plenum based upon the pressure detected by the means for detecting;

means for delivering the cooling fluid from the plenum to the plurality of heat generating means, said means for delivering comprising a nozzle that terminates at respective locations with respect to the plurality of heat generating means such that the plurality of heat generating means are within respective impinging zones of the cooling fluid flowing out of the means for delivering; and

means for varying the cooling fluid flow through the means for delivering.

26. (Previously Presented) The electronic device according to claim 25, further comprising:

means for controlling the means for varying the cooling fluid flow through the means for delivering.

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27. (Previously Presented) The electronic device according to claim 26, further comprising:

means for detecting the temperatures of the plurality of heat generating means, said means for controlling the means for varying the cooling fluid flow being configured to vary the cooling fluid flow through the means for delivering in response to the temperatures detected by the means for detecting.

28. (Previously Presented) The electronic device according to claim 25, further comprising:

means for dividing the plenum into a first chamber and a second chamber.

29. (Previously Presented) The electronic device according to claim 28, wherein the means for dividing the plenum operates to maintain a pressure of the cooling fluid in the second chamber at a substantially uniform pressure.

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